

**Weekly Bureau of Information for All Who Till the Soil or Are Interested in Making Homes**

## AGRICULTURAL DEPARTMENT

All inquiries and communications addressed to The Times-Dispatch will receive prompt attention. This department will appear each Monday, and contributions or suggestions will be welcomed.

**Facts for Farmers, Stock Breeders, Poultry Raisers, Orchardists, Truckers and Gardeners—Queries and Answers**

### BRIEF NOTES THOUGHT OUT BY THE WAYSIDE

The practice of getting rid of the poorest cows and putting good ones in their places looks mighty expensive, but it is not so expensive as keeping them in the herd to drag down the profits of the better ones.

The silo is a good investment for the rich farmer and a great blessing for the average dairyman who is striving to decrease the cost of the milk production.

The woodpile ought to be growing daily now. Sawing wood in the summer time is a tough and useless job.

In nearly every section where fruit growing is new, insects and fungus pests do little damage during the first few years the trees are in bearing. But before the trees have produced many crops, both insects and diseases become important factors in the production of marketable crops.

Forced tests show what it is possible for a dairy cow to do in a short time that they do not reveal her true ability, that is, to produce a large flow of milk and fat for a number of years and also produce strong and talented dairy animals.

To keep pigs free from worms, a condiment should at all times be kept within reach. Sulphur, salt and copra are excellent remedies.

No man can make money feeding 80 cent corn and \$30 mill-feed to moulted hogs.

Grapes intended for wine should be left on the vines until thoroughly ripened.

Plants build up the dead matter in the earth into which higher forms, in which process they store up the heat and energy of the sun. Animals eat plants and set free the heat and energy which the plants have stored up. Plants grow that animals may live.

Regular feeding and painstaking attention to the details that add to the comfort and health of the stock are the essentials of successful stock feeding.

Carelessness in painting the farm buildings loses many of us a great deal in appearance and dollar-and-cent value.

The road that leads to the orchard is the pathway to a simple, happy, prosperous life.

To soften paint brushes which have become dry and hard, heat with much vinegar as required to the boiling point, immerse the brushes and allow them to simmer for ten minutes; then wash in strong soap suds.

Sometimes we leave a gate open about the farm, thinking the stock won't find it till we come back, and very frequently we pay dearly for our folly, in one way or another.

Do not plant trees too deep. Two inches lower than they grew in the nursery is plenty, and will allow for the ground to settle.

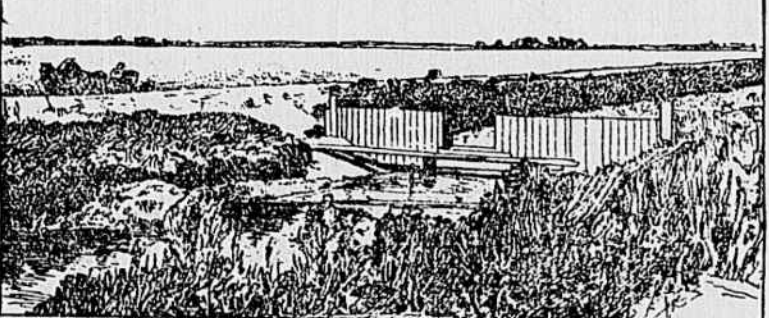
### DRAINAGE OF MARSHES

Professor A. R. Whitson writes: The first step in the development of any marsh land is to drain it. In the case of large areas this will require the construction of large main ditches, requiring the use of a dredge, and co-operation among the adjoining land owners, either by organizing a drainage district or by having the town or county officers take charge of the work. In the case of smaller areas this can frequently be done by mutual agreement between two or three adjoining owners.

Two kinds of drainage must be provided for: first, surface drainage, and second, subsurface drainage. It is occasionally true that the construction of ditches around the edge of a marsh tract in such a way as to carry off most of the water from the surrounding high land without letting it onto the marsh will reduce the wetness of the marsh land to such an extent that crops can be grown without further

ditching. Ordinarily, however, ditches are necessary on the marsh itself. The necessity for subsurface ditching by deep, open ditches or tile depends very largely upon the character of the subsoil and its relation to the surrounding land. When subsurface drainage is necessary, the use of tile makes it possible to do away with open surface ditches, and so greatly facilitates the operations of cultivation. Nevertheless, the muck and peat of marsh lands usually shrink and settle considerably on drainage, making it often desirable to leave open ditches for three or four years until this shrinkage has taken place, after which the ditches may be cleaned out and tile laid and covered.

Generally speaking, drains are of the greatest service in a marsh in the spring. At this time of the year it is very necessary that the free water in the cultivated soil be removed by deep drainage, and if properly drained, the soil will penetrate deeply into the subsoil.



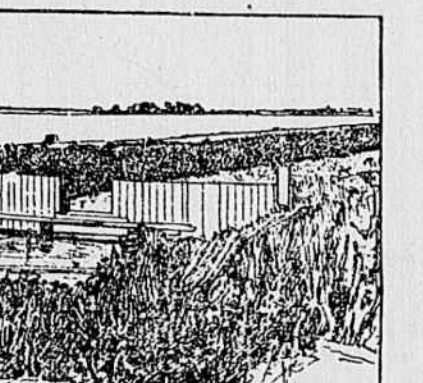
Saving water in a drainage ditch by a dam.

When the roots become thus established, the crops rarely suffer for want of water during a dry season.

It frequently happens during dry summers that crops planted on poorly drained marshes suffer for want of water. This condition is commonly interpreted as an indication that drainage would prove harmful, in that the crops suffer for want of water even when the marsh is not well drained; and if properly drained, the soil would supply a still lesser amount of water. But it should be clearly understood in this connection that when crops are planted on poorly drained marshes the roots establish themselves in the surface area, which soon dries out during a dry period. Removing excess water

by deep drainage to enable crops to obtain more water is absurd; nevertheless, it is a fact that when roots are permitted to penetrate deeply into the subsoil they are able to draw upon a much greater amount of soil for their water requirement.

The soils of some marshes, particularly those covering considerable areas and consisting of coarse fibrous peat underlaid at relatively shallow depths by coarse sand, have a comparatively low water-holding capacity, and are unable, therefore, to supply crops with sufficient water during a very dry period. When the soil along a ditch becomes dry and crops suffer for want of water, no drainage is taking place from it, but considerable water may be rising into the ditch from the bottom, due to the presence of water in the upland at the head of the ditch. Some water is also flowing into the ditch at its head. To aid the crops to obtain sufficient water during an extended dry period, the water escaping



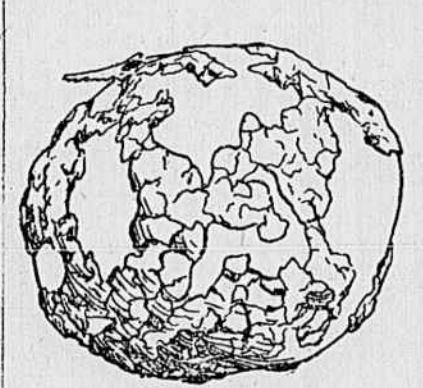
Saving water in a drainage ditch by a dam.

into the ditch may be saved and used advantageously by constructing a dam in the ditch to force the water into and raise it in the dry soil through which the ditch extends.

In making plans for the drainage of any marsh land a complete examination of the subsoil should always be made, as this is the chief factor in determining the plans which should be made for its full drainage.

### COMMON POTATO SCAB

No doubt the chief reason that powdery scab was not recognized earlier by the potato growers in the sections where it is now known to occur is that they failed to distinguish the disease from the ordinary scab, which has been common and widely distributed for many years. In comparing



Appearance of Potato Afflicted With Common Scab.

the two, it may be said in the first place that the lesions produced by the common scab are, on the average, much larger. They are apt to be more irregular in size and shape, and never appear as distinct warts or pustules, containing a brownish powder. They never produce a brownening of the surrounding skin resembling decay, nor a pronounced shrinkage of the tubers, and, nevertheless, the value for food purposes is not materially lessened. It simply makes them unsightly and less easy to prepare for the table.

**As to Feeding Calves.** An Indiana man asks what it will cost to feed a calf until it is three months old. One of the Eastern experiment stations made some experiments along this line two years ago and figured it out that it cost \$10.40 per calf for the first three months, counting the whole milk worth \$2 per hundred. About \$27 for feed for the calf for the first year.

**Alfalfa.** If alfalfa is grown as one of the regular farm crops in rotation, to obtain best results, it should be let lie for five or six years, while the production of the other fields in the rotation is maintained by cropping to clover and using barnyard manure.

### APPLE TREE INSECTS

There are very many different species of insects ranging in size from less than one-fiftieth of an inch to about eight inches in length. From the United States alone over 30,000 species have been recorded, of which



Winter stages of insects: 1, eggs from which tent caterpillars hatch; 2, cocoon of cecropia moth; 3, winter nest of brown tail moth; 4, eggs of the antique tussock moth on cocoon.

over 400 are known to affect in greater or less degree the apple tree or its fruit. Though there are many that do little harm, there are a few that are injurious, for by far the larger number are either harmless or actually beneficial. Ruthless destruction of insects by means of trap lanterns and the like is to be deprecated, since these methods are as apt to capture the beneficial and the harmless as the injurious. Poisons, traps, and other repressive measures must be used with caution and at the right time and place, in order to be most effective.

Before it is possible to combat an insect pest intelligently we must learn something of its habits and of its vulnerable points. When these are known proper remedial measures may then be taken for its extermination or repression.

**The Road Drag.** I have watched the use of the road drag and the grader past my house this summer. The drag leaves the road in better shape—the grader piling roughage in the middle while the drag smooths it off nicely. But the greatest objection is that the drag is not used often enough. Constant attention to the price of good roads, and the use of the drag is so inexpensive that good roads by its use are obtainable, or would be if the money were not spent in using the grader with four teams and five men. That's the way the money goes.

**Age of the Brood Sow.** A good brood sow may be kept until seven or eight years old with profitable results. They need great variety of food while carrying their young and a good deal of nourishing food when they are weaned. Let the sow suck. Sows that have not had a balanced ration are quite apt to eat their pigs when they come along. The growing pig has robbed the sow's system and she has a craving appetite. Give a nourishing diet, with some animal food for two months before farrowing. Salt the food a little.

### STORING SEED CORN FOR THE NEXT SUMMER CROP

Prof. S. H. Robbins writes: After time has been spent selecting seed corn, it would be folly to store it in a place where it would not keep. Freshly-gathered seed corn should not be left in piles in a warm room, or on the floor. It will either sprout, mold or do both. Always store seed corn where there is a good circulation of air, so it will dry out quickly. Never leave it in boxes, in piles, on the porch or in the barn. It should be taken care of at once.

There are only three necessary conditions for storing seed corn; and, if these are followed, one may be reasonably sure that 95 per cent or more of his corn will germinate, provided it was properly matured. First, there must be a good circulation of air about each ear, to carry away the surplus moisture. Second, a temperature must be maintained above freezing, until the seed is thoroughly dry. Third, seed corn must be selected early enough, so that it may have plenty of time to dry before cold weather.

Numerous tests of seed corn have been made. Of all the thousands of samples tested, those that were taken from a house attic, where there was a good circulation of air, gave the highest per cent of germination. Together with attic-stored seed corn may be classed the corn which was stored in the second-story rooms in the house. Second, in per cent of germination, was seed corn stored in a cellar in which there was a heating plant. Cellars without furnaces are usually damp and undesirable for storing. Samples of seed corn stored in oat-bins, on porches, under the eaves of barns, and in open sheds, have also been tested, and they usually gave tests too low for the seed to be of value for planting. It is easily seen that seed corn kept in an attic or an unused second-story room can have the required conditions for drying; namely, good circulation of air, and an even temperature, above the freezing point. The furnace-room, a cellar has one advantage over the attic, in that there it is not likely to freeze as early in the fall. Seed corn packed away in oat-bins can receive no circulation of air, and, therefore, either molds or does both.

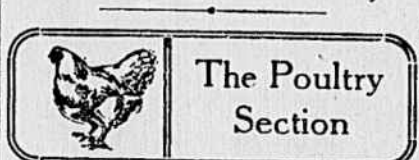
Where a large amount of seed corn is to be stored, it is profitable to build a drying-house. In this drying-house a heating plant can be installed, and ventilators so arranged for air circulation that they can be closed in disagreeable weather, keeping out dampness, or opened during sunny days to take out surplus moisture.

For commercial purposes, seed corn is usually stored in one of three ways: on the floor in large drying-rooms; in slatted crates, piled on top of one another; or in narrow cribs or bins. The last method is the best for drying-drying-rooms. The idea is to secure as nearly as possible the proper conditions and still dry large amounts of seed corn. When stored in any of the above ways, one condition for drying is entirely lacking, namely, a free circulation of air. This explains why seed corn from seedsmen may sometimes be less in germination.

Many devices, easily and cheaply built, are now in use whereby circulation of air can be secured around each ear of corn. Four very desirable methods of storing seed corn on the farm are here suggested. A frame of 2x4's may be built, about four feet square. Braces should be nailed on each end to make the frame stand upright. This has been done, stretch chicken wire over both sides, nailing it securely, using care to make the meshes on both sides to correspond. In each mesh can be placed an ear, no two ears touching. This chicken netting is not available, nail boards over the frame, drive ten-penny finishing nails through the boards from each side and push the ears on the nails, butt slightly, so the ears will not fall off.

Another method is to suspend ten or more ears from the ceiling, or from a wire strung across a room, each ear being secured to the middle with a strand of binding twine. Get a double string about six feet in length. Hold one end in each hand, the right end being a little longer. Pass the string around the first ear about an equal distance from the butt and tip, weave the right hand over the left hand and the left hand between the strings held in the right. Reverse the second ear, butt and tip, and place between the strings.

A very satisfactory method now in use by many experiment stations is the "corn tree." This tree is very economically made by driving ten-penny nails about three inches apart on a 4x4 post about six feet high. The nails should be slanted slightly towards the top of the tree. This tree may be set up any place where drying conditions are good, and it requires very little space. It is easily moved from place to place, and is practically inaccessible to mice.



The Poultry Section

**Keeping Geese.** Geese are very profitable on the farm, but do not keep them unless you have your lawn fenced in and your stock fountain where they can't get at it. We tried the scheme once, but had to confine them in the end, as they would graze in-roosting before the house all day and mudding the water for the cattle and horses. They also played havoc with the trout fry in our spring.

**Poultry Manure.** According to the Central Experiment Station, Ottawa, Canada, the composition of the average poultry manure is as follows: Water, 66 per cent; nitrogen, 2 to 3 per cent; phosphoric acid, 2 to 5 per cent; potash, 3 to 5 per cent. This analysis would place the value per ton at \$5 to \$8.50.

**Health and Cleanliness.** Health is a thing easily lost in the flock, and to insure health, keep the

poultry-house clean, and use lime freely, both in the house and all about the yard and run. It will pay to be liberal in the use of lime. It is also important to have plenty of sunshine in the house.

**Travels of the Turkey.** The first turkey eaten in France was served at the wedding banquet of Charles IX. The Mexican birds were taken to Europe, and then brought again to America as domestic birds. The journals of many of the explorers, among them Captain John Smith, record the attractive qualities of the wild turkey. They are plentiful from Canada south to the seacoast. One English traveler wrote of the "great store of the wild kind of turkey, which remain about the house as tame as ours in England."

**Grass Rotation.** The best results I ever had in corn-raising was on pasture land which had been mowed the year previous to being broken. The grass grew big, the roots held fast to the unused fertility, and the next year not only was the ground rich but in excellent mechanical condition. Eighty bushels per acre can be grown on land so flat and low that it is usually mowed on half that when farmed without grass rotation.

—L. M.

### WHEAT SALES OF WEEK ARE LARGEST OF CROP

Takings Are Estimated From 9,000,000 to 12,000,000 Bushels in All Positions—Foreigners Are Buying.

[Special to The Times-Dispatch.] CHICAGO, December 13.—Cash wheat sales last week were the largest on the crop. Takings during that period were estimated at from 9,000,000 to 12,000,000 bushels in all positions, and at least two-thirds of this wheat was sold by Chicago houses with branches in the Southwest and East. On Saturday the purchases by one foreign government in the Chicago market were reported at 2,000,000 bushels in round numbers. It was said at that time that this same government had bid full prices for another round lot, but that the wheat was not to be had under the conditions asked by the would-be buyers.

It has been said by the writer that whenever the Western receipts of wheat come to the United States in large quantities, the price of wheat will rise. This is a secondary consideration, as foreigners have been buying wheat for the supply of Argentina. Many have been seen as a strong competitor in the wheat market. It was said last week that Italy made heavy purchases of wheat from Argentina, but that the shipments were deferred, and that in the meantime Italy would be forced to come to the United States for the much-needed supplies.

It now transpires that the wheat crop of Canada has been pretty well sold out, and that the grain not to be had in the hands of farmers and country elevators is pretty well owned by Great Britain. A cable received from Rosario late Saturday said that the crop of wheat in that country is far advanced to suffer much damage by frost, that the exportable surplus there is estimated at 108,000,000 bushels. This news was considered quite bearish by grain men in Chicago, and it came through one of the strongest houses in the trade, the report was generally credited.

The bulls in wheat at Chicago do not expect to gain control of the market for future months. This is the first time since the outbreak of the war that the trade continues light and wholly of a professional character.

Western receipts last week were 10,200,000 bushels compared with 12,337,000 bushels the previous week, and 6,000,000 bushels for the corresponding time a year ago.

Corn and oats have traveled hand in hand during the past ten days. Both have ruled quiet, and with the increased movement of corn to points of distribution in that country is far advanced to suffer much damage by frost, that the exportable surplus there is estimated at 108,000,000 bushels. This news was considered quite bearish by grain men in Chicago, and it came through one of the strongest houses in the trade, the report was generally credited.

The provision market has encountered a big run of hogs, not only at Chicago but at leading Western points, and values have eased off some in conditions. The cash trade in both meats and lard has not been up to expectations, but the fresh pork trade has been fairly active.

### MONETARY SITUATION GROWS STRONGER DAILY

NEW YORK, December 13.—Successful resumption of trading in specific listed shares on the Stock Exchange on Saturday marked the longest step yet taken towards re-establishing conditions existing before the closing of July 30 of last year. The return to employment of the large force of men was the substantial factor in the great increase in cheerfulness manifested throughout the financial list. It was evidence of the confidence which prompted this action.

The decision of the leading banking

interests that no necessity for establishing a "money pool" to protect arrangements was another factor in establishing confidence. This was further stimulated by recent reports indicating an early favorable decision by the Inter-Commerce Commission regarding Eastern freight rate case, now under reconsideration.

Under existing conditions, only a few important stocks were withheld from the regular exchange trading list, these, with few exceptions, showed marked advances over minimum prices. Concurrently, bond prices also mounted perceptible strength, and free absorption of new bond offerings amounting to \$15,000,000 indicated demand for attractive issues.

Strength of German exchange for greater part of the week was generally believed to represent selling of currencies from that source, along with the placing of loans in this market for German interests. The operations of clearing-houses, by showing another nominal low of moderate loan expansion and a decrease of almost \$7,100,000 in actual reserves, the whole, however, domestic monetary situation is stronger than at any time since the outbreak of the war.

### REVIEW OF COTTON'S WEEK

NEW ORLEANS, December 13.—Cotton futures declined in price last week, but selling of hedges against spot selling to liquidate mode amount of selling for speculative spot account. Department of Agriculture's estimate of the crop of 15,960,000 bales was one of the bearish surprises of the season, and worked as a factor against values as a narrow market would allow.

On all important declines followed by a steady, strong, and short interest existing. This short interest probably was chiefly the result of the comparatively high closing for the week's trade. The net results of the week's trading in contracts was a loss of 24 points. At the highest on Monday prices were 2 to 3 points over the week's close; at the lowest on Friday they were 32 to 35 points under.

This week the trade will pay particular attention to the export situation. There are many rumors of freight engagements. On last week the trade was surprised to find more cotton afloat for Liverpool than this country than there was a year ago, the figures being 381,000 bales against 335,000.

France is beginning to increase demand for cotton in a marked manner. It is also said that the demand for Germany is greater than can be supplied, because of the lack of cotton freight room.

Should the export situation improve, improvement this week would be difficult to hold the market down unless the interior again immediately following the issuance of the government's forecast of the year.



Richmond Trust & Savings Company

Main and Seventh.

Benjamin Franklin

was a wise man.

He said: "At a great penny worth, pause awhile; many are ruined buying bargains."

How true this is!

If he were living to-day, he would advise all men and women to start the New Year with a savings account, and to stand clear of extravagance and wildcat schemes.

This bank allows 3% interest monthly, and will show you how to invest safely when you get \$100 or more.

One Million Dollars Capital

## Our Home Company

INCORPORATED 1932.

## Virginia Fire & Marine Insurance Co.

WE INVITE YOUR SCRUTINY AND SOLICIT YOUR PATRONAGE

Assets - - - - - \$1,730,370.00

## First National Bank

MAIN AND NINTH.

Capital and Surplus . . . \$ 3,000,000  
Deposits . . . 13,375,000  
Resources Over . . . 20,000,000

Established 1865.

## We Cordially Invite

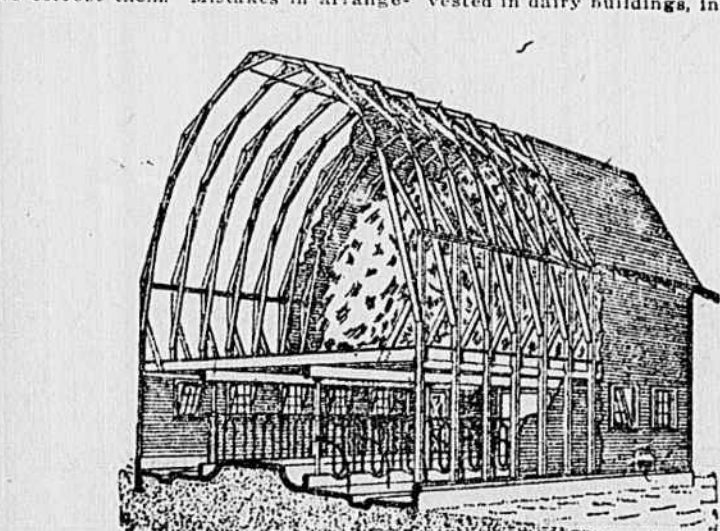
Good people to open an account here.

We solicit accounts, subject to check in the usual way, and allow 3% interest on balances.

## Virginia Trust Co.

1106 East Main Street, Richmond, Va.

Established 1892.



A Modern Dairy Barn, Showing Construction of the Self-Supporting Roof.

ment may compel a great many unnecessary steps, and require work to be done at a great disadvantage, day after day, year in and year out. Mistakes may be made in the location of the silo, in the placing of doors, or in the dimensions of platforms, gutters, passageways and alleys, and the location of posts. These details should all

undue labor is required in taking care of the cows. Work is often done at a great disadvantage, as, for instance, when silage is carried to the cows in baskets. Dairy work must be done twice a day, every day in the year, and a slight fault in arrangement may mean a large amount of extra work in a year's time.